

Claims

What is claimed is:

1 1. An information processing system, comprising:
2 a first computing device for:
3 receiving an initialization packet originating from a client;
4 in response to at least the initialization packet, outputting a response packet to the client;
5 receiving a request packet originating from the client; and
6 in response to at least the request packet and a state of at least one of the first computing
7 device and a second computing device, selectively outputting the request packet to the second
8 computing device for performing an operation in response to the request packet.

1 2. The system of Claim 1 wherein the first computing device is a network interface
2 card.

1 3. The system of Claim 1 wherein the operation is part of a software application.

1 4. The system of Claim 3 wherein the software application is a socket application.

1 5. The system of Claim 1 wherein the initialization packet is addressed by the client
2 to the first computing device, and wherein the first computing device is for receiving the
3 initialization packet in response to the addressing.

1 6. The system of Claim 1 wherein the operation includes outputting a response packet
2 to the client, and wherein the first computing device is for:
3 in response to at least the request packet and the state, selectively outputting the request
4 packet to the second computing device for outputting the response packet to the client, such that
5 the output response packet bypasses the first computing device.

1 7. The system of Claim 1 wherein the first computing device is for receiving the
2 initialization packet through a global computer network.

1 8. The system of Claim 7 wherein the first computing device is for selectively
2 outputting the request packet to the second computing device through a local area network.

1 9. The system of Claim 1 wherein the first computing device is for:
2 in response to at least the initialization packet, establishing a data structure of a connection
3 with the client; and
4 in response to at least the request packet and the state, selectively outputting the data
5 structure to the second computing device for associating an application of the second computing
6 device with the data structure of the connection.

1 10. The system of Claim 1 wherein the first computing device is for:
2 in response to at least the initialization packet, establishing a data structure of a connection with
3 the client, the data structure including a group of sequence numbers associated with the
4 connection.

1 11. The system of Claim 10 wherein the first computing device is for:
2 in response to at least the request packet and the state, selectively outputting the data structure to
3 the second computing device for performing the operation in response to the data structure, the
4 operation including outputting a response packet to the client according to the group of sequence
5 numbers, such that the output response packet bypasses the first computing device.

1 12. The system of Claim 10 wherein the group of sequence numbers includes at least
2 one start sequence number, at least one current sequence number, and at least one
3 acknowledgement sequence number.

1 13. The system of Claim 1 wherein the first computing device is for:
2 in response to at least the initialization packet, establishing a data structure of a connection
3 with the client, the data structure including an address of the first computing device; and
4 in response to at least the request packet and the state, selectively outputting the data
5 structure to the second computing device for performing the operation in response to the data
6 structure, the operation including outputting a response packet to the client with a source address
7 equal to the address of the first computing device, such that the output response packet bypasses
8 the first computing device.

1 14. The system of Claim 13 wherein the address includes an IP address.

1 15. The system of Claim 14 wherein the address includes a port.

1 16. The system of Claim 15 wherein the port is a TCP port.

1 17. The system of Claim 15 wherein the port is a UDP port.

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1 18. A method performed by a first computing device of an information processing
2 system, the method comprising:
3 receiving an initialization packet originating from a client;
4 in response to at least the initialization packet, outputting a response packet to the client;
5 receiving a request packet originating from the client; and
6 in response to at least the request packet and a state of at least one of the first computing
7 device and a second computing device, selectively outputting the request packet to the second
8 computing device for performing an operation in response to the request packet.

1 19. The method of Claim 18 wherein the first computing device is a network interface
2 card.

1 20. The method of Claim 18 wherein the operation is part of a software application.

1 21. The method of Claim 20 wherein the software application is a socket application.

1 22. The method of Claim 18 wherein the initialization packet is addressed by the client
2 to the first computing device, and wherein the method comprises:
3 receiving the initialization packet in response to the addressing.

1 23. The method of Claim 18 wherein the operation includes outputting a response
2 packet to the client, and wherein the method comprises:
3 in response to at least the request packet and the state, selectively outputting the request
4 packet to the second computing device for outputting the response packet to the client, such that
5 the output response packet bypasses the first computing device.

1 24. The method of Claim 18 wherein the method comprises:
2 receiving the initialization packet through a global computer network.

1 25. The method of Claim 24 wherein the method comprises:
2 selectively outputting the request packet to the second computing device through a local
3 area network.

1 26. The method of Claim 18 wherein the method comprises:
2 in response to at least the initialization packet, establishing a data structure of a connection
3 with the client; and
4 in response to at least the request packet and the state, selectively outputting the data
5 structure to the second computing device for associating an application of the second computing
6 device with the data structure of the connection.

1 27. The method of Claim 18 wherein the method comprises:
2 in response to at least the initialization packet, establishing a data structure of a connection
3 with the client, the data structure including a group of sequence numbers associated with the
4 connection.

1 28. The method of Claim 27 wherein the method comprises:
2 in response to at least the request packet and the state, selectively outputting the data
3 structure to the second computing device for performing the operation in response to the data
4 structure, the operation including outputting a response packet to the client according to the group
5 of sequence numbers, such that the output response packet bypasses the first computing device.

1 29. The method of Claim 27 wherein the group of sequence numbers includes at least
2 one start sequence number, at least one current sequence number, and at least one
3 acknowledgement sequence number.

1 30. The method of Claim 18 wherein the method comprises:
2 in response to at least the initialization packet, establishing a data structure of a connection
3 with the client, the data structure including an address of the first computing device; and
4 in response to at least the request packet and the state, selectively outputting the data
5 structure to the second computing device for performing the operation in response to the data
6 structure, the operation including outputting a response packet to the client with a source address
7 equal to the address of the first computing device, such that the output response packet bypasses
8 the first computing device.

1 31. The method of Claim 30 wherein the address includes an IP address.

1 32. The method of Claim 31 wherein the address includes a port.

1 33. The method of Claim 32 wherein the port is a TCP port.

1 34. The method of Claim 32 wherein the port is a UDP port.